

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F02M31/20 F28D7/02

F28F13/06

F28F1/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F28F F28D F02M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category [*]	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 938 036 A (FOLEY JOHN J ET AL) 3 July 1990 (1990-07-03)	1-5,8, 11,14
Y	column 2, line 31 – column 4, line 63; figures	6,7,9, 10,12,15
X	US 5 251 603 A (KIMURA HIDEKI ET AL) 12 October 1993 (1993-10-12) column 2, line 45 – column 3, line 25; figure 2 column 3, line 65 – column 4, line 28; figures 5,6 column 4, line 42 – line 62; figures 7,8	1,2,4,5, 8,11,13, 14
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

^{*} Special categories of cited documents :

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- "E" earlier document but published on or after the international filing date
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- "P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

29 November 2004

Date of mailing of the international search report

03/12/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 37 02 963 A (SUEDDEUTSCHE KUEHLER BEHR) 11 August 1988 (1988-08-11)	6,12,15
A	column 3, line 45 – column 4, line 29; figures	1,2,4,5, 8,10,12, 14
Y	FR 69 567 E (SOCIÉTÉ ANONYME DES USINES CHAUSSON) 10 November 1958 (1958-11-10)	7
A	the whole document	1,2,4,5, 8,14,15
Y	WO 98/51923 A (BENNETT TECHNOLOGIES L L C) 19 November 1998 (1998-11-19)	9,10
A	the whole document	1-3,14
A	DE 34 43 085 A (KUEHNERR GMBH & CIE) 13 June 1985 (1985-06-13)	1,2,4-6, 8,10,11, 13,14
	the whole document	

Information on patent family members

International Application No
PCT/EP2004/052259

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
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US 5251603	A	12-10-1993	JP	4132446 U		08-12-1992
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